

10/030452

PATENT

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10 JAN 2002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
Masayuki YABUTA et al) Group Art Unit: To Be Assigned
)
Application Number: To Be Assigned) Examiner: To Be Assigned
)
Filed: January 10, 2002)
)
International Application No. PCT/JP01/03909)
Filed: May 10, 2001)
)
For: METHODS FOR REDUCING THE FORMATION OF BYPRODUCTS IN THE
PRODUCTION OF RECOMBINANT POLYPEPTIDES

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-referenced application, which is a national phase application of PCT/JP01/03909, filed May 10, 2001, please enter the following preliminary amendment.

IN THE CLAIMS:

Please replace claims 3, 6, and 7 with the following claims, provided in a clean format in accordance with 37 C.F.R. § 1.121.

3. (Amended) The method as defined in Claim 9 or 10 wherein the host cell is a prokaryotic cell or an eukaryotic cell.

6. (Amended) The method as defined in any one of Claims 9 and 10 wherein the molecular weight of the polypeptide comprising a serine residue is about 1000 to 2000.

7. (Amended) The method as defined in any one of Claims 9 and 10 wherein the polypeptide comprising a serine residue is an atrial natriuretic peptide.

Please cancel Claims 1 and 2 and replace with the following new claim:

--9. (New) A method for reducing formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue, comprising culturing, in a medium, host cells transformed to produce a recombinant polypeptide comprising a serine

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residue and adding to said medium at least one of histidine, methionine or glycine in an amount effective to reduce said byproduct formation.

--10. (New) A method for producing a polypeptide comprising a serine residue comprising culturing transformed host cells in a medium and adding at least one of histidine, methionine or glycine to the medium in an amount effective to reduce formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue.

--11. (New) A culture medium comprising:

(i) a host cell transformed to recombinantly express a polypeptide comprising a serine residue;

(ii) at least one of histidine, methionine or glycine added to the medium in an amount effective to reduce formation of a byproduct polypeptide comprising O-acetylserine residue in place of a serine residue.--

A marked-up version of the claims, showing the changes Applicants have made are in Appendix A.

REMARKS

Applicants believe that no new matter is introduced in the filing of this Preliminary Amendment. Applicants respectfully request examination of the above-named application in view of the present amendments.

Respectfully submitted,

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January 10, 2002

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APPENDIX A
VERSION OF CLAIMS WITH MARKINGS

In accordance with 37 C.F.R. § 1.121(c), Applicants submit a marked-up version of the claims, in order to indicate changes Applicants have made.

Please cancel Claims 1 and 2 and replace with the following new claim:

1. Cancel
2. Cancel
3. (Amended) The method as defined in Claim 9 [1] or 10 [2] wherein the host cell is a prokaryotic cell or an eukaryotic cell [in a method for producing a polypeptide containing a serine residue by culturing transformed cells].
4. The method as defined in Claim 3 wherein the host cell is a microorganism.
5. The method as defined in Claim 4 wherein the microorganism is *Escherichia coli*.
6. (Amended) The method as defined in any one of Claims 9 and 10 [1 to 5] wherein the molecular weight of the polypeptide comprising [containing] a serine residue is about 1000 to 2000.
7. (Amended) The method as defined in any one of Claims 9 and 10 [1 to 6] wherein the polypeptide comprising [containing] a serine residue is an atrial natriuretic peptide.
8. The method as defined in Claim 7 wherein the atrial natriuretic peptide is human atrial natriuretic peptide.
- 9. (New) A method for reducing formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue, comprising culturing, in a medium, host cells transformed to produce a recombinant polypeptide comprising a serine residue and adding to said medium at least one of histidine, methionine or glycine in an amount effective to reduce said byproduct formation.
- 10. (New) A method for producing a polypeptide comprising a serine residue comprising culturing transformed host cells in a medium and adding at least one of

histidine, methionine or glycine to the medium in an amount effective to reduce formation of a byproduct polypeptide comprising an O-acetylserine residue in place of a serine residue.

--11. (New) A culture medium comprising:

(i) a host cell transformed to recombinantly express a polypeptide comprising a serine residue;

(ii) at least one of histidine, methionine or glycine added to the medium in an amount effective to reduce formation of a byproduct polypeptide comprising O-acetylserine residue in place of a serine residue.--

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